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V1	24.05.2024	First Version	Guillaume Ricard	

List of Acronyms and Abbreviations

Abbr.	Description	Abbr.	Description
2-PC	Two-phase cooling	MTC	Motorised turbo-compressor(s)
A/C	Aircraft	OCV	Open circuit voltage
AM	Additive Manufacturing	OEM	Original Equipment Manufacturer
BoP	Balance of Plant	PGS	Power Generation System
CA	Consortium agreement	POD	PGS Unit
CFD	Computational fluid dynamics	PPS	Propulsion Power System
CL	Catalyst layer(s)	PEM	proton exchange membranes
DCE	Dissemination, Communication and Exploitation	PEMFC	Proton Exchange Membrane Fuel Cell
DMU	Digital mock-up	PM	Particulate matter
EASA	European Union Aviation Safety Agency	RAC	Ram Air Channel(s)
FC	Fuel Cell	RH	Relative humidity
FL250	Flight level 250 (= 25,000 ft)	SAF	Synthetic aviation fuel

HX	Heat exchanger(s)	SLM	Supporting layer manufacturing
IP	Intellectual property	SoA	State of the Art
IPN	Interpenetrating polymer networks	TMS	Thermal Management System
IPR	Intellectual property rights	TEFO	Total Engine Flame Out
ISA-35	International Standard Atmosphere	TO	Take-Off
KPI	Key Performance Indicator	ToC	Top of Climb
KSO	Key Strategic Orientations	TOGA	Take-Off and Go-Around
L2	Liquified hydrogen	TRL	Technology Readiness Level
MEA	Membrane Electrode Assembly	ZEROe	Airbus initiative towards zero emission aircraft
MCU	Motor control unit		
MC	Motorized Compressor		
TC	Turbo Compressor		

1. Executive Public Summary

Following product level and sub-systems requirements definition, and an architecture trade-off, this deliverable presents the preliminary design of the Main Equipment of the Air Supply Product, based on an initial architecture selection (two Motorized Turbo Compressor architecture), and associated first set of Air Supply Product requirements.

The outcomes of the studies presented herein in this document will be useful to mature the upper-level architecture and sizing trade-offs up to propulsion System and Aircraft levels, then refine architecture selection and component requirements, as relevant.

11. Acknowledgments

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